

EVALUATION OF THREE NOVEL COATED TOOTH BRUSHES ON THE SURFACE TEXTURE OF ENAMEL - AN IN VITRO 3D LASER PROFILOMETRIC STUDY

ABSTRACT:

AIM:

To evaluate the change in surface texture of the enamel caused by three novel coated tooth brushes using a 3 dimensional laser profilometer

MATERIALS AND METHODS:

Sixty maxillary premolar teeth extracted for orthodontic purpose were selected, sectioned and the buccal portion of the teeth were mounted on the acrylic base. Teeth were divided into four groups according to the type of brush used: charcoal coated, gold coated, silver coated and nylon coated tooth brushes. Pre brushing and post brushing surface roughness on the enamel were measured using laser profilometer. The change in the surface roughness values were statistically analyzed using paired t test.

RESULTS:

There was a statistically significant increase in surface abrasion caused by Silver coated tooth brushes compared to that of charcoal coated, gold coated and nylon coated tooth brushes.

CONCLUSION:

Silver coated tooth brushes caused more abrasion compared to charcoal coated, gold coated and nylon coated tooth brushes. Further long term longitudinal studies are needed to confirm the result.

KEY WORDS: Laser profilometer, customized brushing apparatus, coated tooth brush